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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,057	07/02/2003	Michael Lee Zierolf	BFGRP0304US	6656

7590

05/12/2004

Renner, Otto, Boisselle & Sklar, LLP  
1621 Euclid Ave - 19th Floor  
Cleveland, OH 44115

EXAMINER
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SCHWARTZ, CHRISTOPHER P

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 05/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/613,057	Applicant(s) ZIEROLF, MICHAEL LEE	
	Examiner Christopher P. Schwartz	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 2.

- 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☒ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

CHRISTOPHER P. SCHWARTZ  
PRIMARY EXAMINER

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement has been received and considered.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Burgess.

Regarding claim 20 Burgess discloses a method for controlling a braking torque applied to the wheel of a vehicle, as broadly claimed, comprising the steps of receiving a command torque at 12 (see column 4 lines 32+), measuring an amount of torque via torque transducer 18 and adjusting a brake pressure output command at 26 provided to the brake actuator based on limiting a degree of the torque feedback control, as broadly claimed, and as discussed in column 4 lines 54-64. The system then makes use of a pressure vs. torque curve (see figure 1) to control the brake pressure applied to the wheel brakes to eliminate skidding.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgess in view of Littlejohn.

Regarding claims 1,17 Burgess discloses a brake gain based torque controller, as broadly claimed , which receives a command torque at 12 (see column 4 lines 32+), a measured amount of torque via torque transducer 18 and a brake pressure output command generated at 26. The system then makes use of a pressure vs. torque curve (see figure 1) to control the brake pressure applied to the wheel brakes to eliminate skidding.

Burgess lacks using the inverse relationship of pressure divided by torque to regulate the braking pressure.

It is the examiner's position that this would simply be an alternate equivalent method to that of Burgess. Applicant lacks any specific criticality in the specification as to why this specific ratio must be utilized.

Notwithstanding this position the reference to Littlejohn seems to disclose using this relationship in column 7 around line 8.

Accordingly one having ordinary skill in the art at the time of the invention would have found it obvious to have used a "computed inverse brake gain" simply as an alternative arrangement to that of Burgess, as taught by Littlejohn.

Regarding claims 2,3, as broadly claimed, these limitations, or an alternative equivalent thereof, are inherent in the method of Burgess, as modified.

Regarding claim 4 it is notoriously well known in the art to use predetermined "look up" tables for different parameters used in the calculation of desired braking forces for specific situations. Littlejohn suggests this known idea in col. 7 line 64.

Accordingly to have used a look up table for the braking pressure sensed by the transducer 16 of Burgess would simply amount to an alternate equivalent method to obtain a desired braking pressure signal to the ordinary skilled worker in the art at the time the invention was made.

Regarding claims 5,6 note the "pressure" or "flow" valve at 20, as broadly claimed, as the valve can be said to regulate both properties.

Regarding claims 7 and 8 the system of Burgess, as modified, appears to be applicable to both aircraft and automobiles. See the discussion in column 1 line 50.

Regarding claim 9 note the pressure sensor at 18.

Regarding claim 10 these limitations are simply an obvious variant of that disclosed in Burgess, as modified.

Regarding claim 11 see the discussion in column 5 lines 47+.

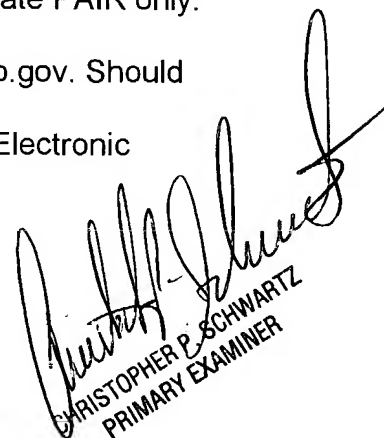
Regarding claims 12-16,18,19 as broadly claimed, these limitations are considered to be fairly taught by Burgess as modified.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Schwartz whose telephone number is 703-308-0576. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cps  
5/5/04

  
CHRISTOPHER P. SCHWARTZ  
PRIMARY EXAMINER